

Application No. 10/798,632Case No. N0186US**REMARKS****I. Status**

Dependent claim 43 has been amended merely for consistency. No new matter has been added as a result. Claims 1-41 have been previously canceled. Accordingly, claims 42-80 are currently pending.

II. Rejections Under 35 U.S.C. § 103

A. Claims 42-47, 51-64, 66-72, and 74-78 were rejected under 35 U.S.C. §103(a) as being unpatentable over Houston, et al. (U.S. 6,146,143) in view of Lechner (U.S. 2003/0059743).

Claim 42 and Dependents

Claim 42 recites, *inter alia*, "producing, by a map developer, a source geographic database containing data representing a real-world locale including (i) geographic coordinates of positions of roads, (ii) street names of the roads, (iii) address ranges along the roads, (iv) turn restrictions at intersections of the roads, (v) road connectivity, and (vi) road shape," "transforming, by the map developer, the data representing the real-world locale into data representing an imaginary geographic locale to form a template geographic database," and "providing, by the map developer to a game developer, the computer-readable medium containing the template geographic database, the game developer being separate from the map developer." The combination of the cited references does not teach or suggest at least these features and does not render the claim as obvious.

Houston, et al. disclose a system for simulating the operation of a vehicle. (Houston, et al., Abstract). The system includes a computing means that presents a temporal sequence of visual images that depicts the operation of the simulated vehicle in a simulated environment. (Houston, et al., column 4, lines 20-25). The computing means includes a database of a simulated environment representing a roadway network and terrain bordering the roadway network. (Houston, et al., column 4, lines 38-42). The simulated roadway network in the database is preferably partitioned into highways, rural roads, and city streets, having features

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conventionally associated with each such roadway to accurately simulate travelling thereon. (Houston, et al., column 4, lines 43-50).

Lechner discloses automatically generating a terrain model for display during a simulated flight along a predefined mission route. (Lechner, Abstract). The Background section of Lechner discloses a terrain model designer generating a terrain model for display during flight simulation. (Lechner, paragraphs [0001] and [0003]). The terrain model designer may obtain terrain source data from electronic collections of terrain data that may be available from, for example, the Joint Services Imaging Processing Station, the Gateway Data Navigator, or the United States Imagery and Geospatial Information Services. (Lechner, paragraphs [0006]-[0007]).

However, even if one of ordinary skill in the art would have combined the features of Houston, et al. and Lechner, the combination does not teach or suggest or render obvious a source geographic database containing data representing a real-world locale including (i) geographic coordinates of positions of roads, (ii) street names of the roads, (iii) address ranges along the roads, (iv) turn restrictions at intersections of the roads, (v) road connectivity, and (vi) road shape.

The Examiner asserts that Houston, et al. disclose the claimed source geographic database. (Office Action, page 2). However, the database of Houston, et al. stores visual images that are presented for a driving simulation. (Houston, et al., column 4, lines 20-50). There is no teaching, suggestion, or mention of data including geographic coordinates of positions of roads. Houston et al, mention images and visual depictions of roads not geographic coordinates of roads, such as latitude and longitude coordinates.

Furthermore, there is no teaching or suggestion of data representing address ranges along the roads. The Examiner asserts that address ranges of roads are conventionally associated with roadways. (Office Action, page 2). However, Houston, et al. use images of roadways to present a driving simulation, and the images may not include addresses of buildings, let alone full address ranges along roads. When driving down roads, addresses are often not visible to a driver, especially in commercial areas. There is no teaching or suggestion that the visual images in Houston, et al. include address information. Even if one address of one random building is shown in the visual images, that is not the same as data representing a full address range along that road.

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Also, there is no teaching or suggestion that street names of roads are also provided. Visual images used in Houston, et al. may be presented in such a way that may exclude street names or the roads that are being simulated may not include street name signs. (See Houston, et al., Figures 4, 5, 6, 7, and 11).

Additionally, Houston, et al. does not teach or suggest producing the source geographic database by a map developer that is separate from a game developer. Lechner discloses that a terrain model designer may obtain terrain source data from outside sources, such as the Joint Services Imaging Processing Station, the Gateway Data Navigator, or the United States Imagery and Geospatial Information Services. The Examiner asserts that these sources are map developers separate from the simulator or game developer of Houston, et al. (Office Action, page 3). However, it would not make sense for the simulator designer of Houston, et al. to obtain data from the sources described in Lechner because the sources of Lechner provide terrain source data used for flight simulation, not visual images along roadways for depicting accurate driving along streets.

Furthermore, there is no teaching, suggestion, or mention of transforming, by the map developer, the data representing the real-world locale into data representing an imaginary geographic locale to form a template geographic database. The Examiner asserts that when the outside sources of Lechner ("the map developer") send terrain source data to a simulator developer, only authorized data depicting a portion of the world is provided, and, thus, the boundaries of the authorized portion misrepresent the real world resulting in an imaginary geographic locale. (Office Action, page 3). However, just because data that represents a portion of a real-world locale is provided does not mean data representing a real-world locale is transformed into an imaginary geographic locale. Whatever authorized data that is provided in Lechner, even if it only represents a portion of the real-world, still represents a real-world area, not an imaginary locale. For example, the Joint Services Imaging Processing Station, the Gateway Data Navigator, and the United States Imagery and Geospatial Information Services, based on the disclosure, do not transform real-world terrain source data into data representing imaginary locales.

Accordingly, claim 42 is allowable for at least these reasons. Claims 43-47 and claims 51-58 depend, directly or indirectly, from allowable claim 42 and, therefore, are allowable for at least the same reasons.

Application No. 10/798,632Case No. N0186USClaim 59

Claim 59 recites features similar to the features of claim 42 described above. Some of the arguments made in regards to claim 42 appropriately apply to claim 59 as well. Furthermore, claim 59 recites, *inter alia*, "producing, by a map developer, a source geographic database containing data representing a road network in a real-world locale, wherein the data representing the road network include navigation-related attributes for digital route calculation and digital route guidance about the road network." The combination of the cited references does not teach or suggest at least these features and does not render the claim as obvious.

Lechner discloses mission routes for simulated flights, and Houston, et al. disclose a mechanism for dynamically controlling weather effects and traffic events in a simulated environment. However, there is no teaching, suggestion, or mention of navigation related attributes for digital route calculation and digital route guidance about a road network. For example, a person engaged in the simulation of Houston, et al. may experience traffic and different weather conditions, but there is no mention of the ability to conduct digital route calculation, such as entering address information to calculate a driving route to a destination, and there is no mention of digital route guidance, such as providing turn-by-turn instructions and visuals to guide someone to the destination along the calculated driving route.

Accordingly, claim 59 is allowable for at least these reasons.

Claim 60 and Dependents

Claim 60 recites, *inter alia*, "producing a source geographic database containing data representing a plurality of road segments corresponding to a road network in a real-world locale" and "transforming the data representing the plurality of road segments into data representing an imaginary geographic locale to form a template geographic database." The combination of the cited references does not teach or suggest at least these features and does not render the claim as obvious.

None of the cited references discloses a database containing data representing a plurality of road segments corresponding to a road network in a real-world locale. Houston, et al. disclose images of roads that may be categorized into highways, rural roads, and city streets, but that is not the same as data representing road segments. For example, there is no mention of data representing individual

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segments that connect together to model a road or a portion thereof. The Examiner does not even address the limitation of road segments in the Office Action.

Accordingly, claim 60 is allowable for at least these reasons. Claims 61-64 and claims 66-67 depend, directly or indirectly, from allowable claim 60 and, therefore, are allowable for at least the same reasons.

Claim 68 and Dependents

Claim 68 recites, *inter alia*, "producing a source geographic database containing data representing a plurality of road segments corresponding to a real-world locale, wherein the data representing the plurality of road segments are configured to be compiled for navigation related functions in a vehicle navigation device" and "transforming at least some data representing the plurality of road segments from the source geographic database to form a template geographic database, wherein the template geographic database contains data representing an imaginary geographic locale." The combination of the cited references does not teach or suggest at least these features and does not render the claim as obvious.

Neither Lechner nor Houston, et al. disclose data representing a plurality of road segments, let alone data representing a plurality of road segments that are configured to be compiled for navigation related functions in a vehicle navigation device. The Examiner does not address these specific limitations in the Office Action. Houston, et al. discloses presenting a temporal sequence of visual images that depicts the operation of the simulated vehicle in a simulated environment, but that is not the same as data representing a plurality of road segments that are configured to be compiled for navigation related functions in a vehicle navigation device. There is no mention of use of a vehicle navigation device or data thereof for navigation related functions, such as calculating a driving route and providing turn-by-turn instructions and guidance to a destination.

Furthermore, there is no teaching or suggestion of transforming at least some data representing the plurality of road segments to form a template geographic database that contains data representing an imaginary geographic locale. Houston, et al. and Lechner do not disclose transforming data representing road segments.

Accordingly, claim 68 is allowable for at least these reasons. Claims 69-72

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and claims 74-75 depend, directly or indirectly, from allowable claim 68 and, therefore, are allowable for at least the same reasons.

Claim 76 and Dependents

Claim 76 recites, *inter alia*, "producing a source geographic database containing data corresponding to roads in a real world geographic locale including (i) geographic coordinates of positions of the roads, (ii) street names of the roads, (iii) address ranges along the roads, (iv) turn restrictions at intersections of the roads, (v) road connectivity, and (vi) road shape" and "transforming data representing a real-world road network structure from the source geographic database to form a template geographic database, wherein the template geographic database contains data representing an imaginary road network structure, wherein said step of transforming includes at least one of modifying of the positions of the roads and changing the street names of the roads." The combination of the cited references does not teach or suggest at least these features and does not render the claim as obvious.

Claim 76 recites features similar to the features of claim 42 described above. Some of the arguments made in regard to claim 42 appropriately apply to claim 76 as well. Furthermore, neither Lechner nor Houston, et al. disclose that transforming includes at least one of modifying positions of the roads and changing the street names of the roads. Just because the teachings of Lechner mention that terrain source data may be obtained from external electronic collections does not change the fact that data representing the real-world is still being used in the simulations. Lechner and Houston, et al. do not suggest modifying positions of roads or changing the street names of the roads to form a template database representing an imaginary road network structure.

Accordingly, claim 76 is allowable for at least these reasons. Claims 77-78 depend from allowable claim 76 and, therefore, are allowable for at least the same reasons.

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B. Claims 48-50, 65, 73, and 79-80 were rejected under 35 U.S.C. §103(a) as being unpatentable over Houston, et al. in view of Lechner and Graf, et al. (U.S. 4,645,459).

Dependent Claims 48-50, 65, 73, and 79-80

Claims 48-50, claim 65, claim 73, and claims 79-80 depend, directly or indirectly, from allowable claim 42, claim 60, claim 68, and claim 76, respectively, and, therefore, are allowable for at least the same reasons.

Further Limitations

One or more of the dependent claims recite features that are independently allowable. For example, claim 43 recites, *inter alia*, "wherein the data of the source geographic database are suitable for providing navigation-related functions for a real-world road network." As part of a simulator, Houston, et al. disclose control devices including a steering wheel, an accelerator, a brake, a clutch, a gear shift, a turn signal, a windshield wiper control mechanism, and a mirror control mechanism. (Houston, et al., column 3, lines 61-63 and Figure 3). However, such control devices are not the same as data suitable for providing navigation-related functions for a real-world road network. The data disclosed in Houston, et al. concerns visual images of roads for a driving simulation, not data suitable for providing navigation-related functions, such as calculating a route to a specific address and providing turn-by-turn instructions as guidance to the destination.

Claim 46 recites, *inter alia*, "selecting a characteristic geographic parameter of the source geographic database," "using the selected characteristic geographic parameter and at least some data from the source geographic database when forming the template geographic database," and "wherein the template geographic database has a characteristic geographic parameter similar to the characteristic geographic parameter of the source geographic database." The combination of the cited references does not teach or suggest at least these features. Lechner discloses that a terrain model designer may obtain terrain source data from electronic collections of terrain data that may be available from, for example, the Joint Services Imaging Processing Station, the Gateway Data Navigator, or the United States Imagery and Geospatial Information Services. However, even if the

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electronic collections provide a portion of terrain source data, that is not the same as selecting a characteristic geographic parameter of the source geographic database and using the selected characteristic geographic parameter and at least some data from the source geographic database when forming the template geographic database. There is no mention of selection a characteristic geographic parameter of the source geographic database. Claim 77 recites features similar to features of claim 46 and is allowable for at least the same reasons.

Claim 50 recites, *inter alia*, "wherein transforming comprises applying an operation selected from the set consisting of: altering a location of a road segment, moving locations of roads by varying distances, switching a relative vertical ordering of roads that cross one another at different elevations, and performing horizontal or rotational transformations of locations of roads." Houston, et al. and Lechner do not disclose at least these features. The Examiner asserts that these features are disclosed in Graf, et al. (Office Action, page 7).

Graf, et al. disclose a computer generated synthesized imagery ("CGSI") system that allows a scene to be constructed by placing high fidelity objects on a specified surface or background. (Graf, et al., column 2, lines 50-60). The system is used for generating simulator gaming areas, which may be fictitious. (Graf, et al., column 4, lines 40-50). The system uses an object library, which normally comprises photographic matter, to store images from individual real-world elements for use in generating a gaming area. (Graf, et al., column 6, lines 53-57). Object, surface, or special-effects processing is used to change a stored image in normal straight-on perspective to scene conditions. (Graf, et al., column 8, lines 14-21).

Firstly, Graf, et al. disclose changing a stored image in terms of perspective, not altering a location of a road segment or switching an ordering of roads relative to a real-world setting. Secondly, even if one of ordinary skill in the art would have combined the teachings of Graf, et al. with the teachings of Houston, et al. and Lechner, there is still no teaching or suggestion that the map developer (the external electronic collections that provide source terrain data of Lechner) would do any sort of changing to the source data it is providing. The changing disclosed by Graf, et al. would occur by the game or simulator developer, not the separate map developer.

Claim 61 recites, *inter alia*, "wherein the data representing the plurality of road segments is not imagery data that correspond to visual appearances of roads." The

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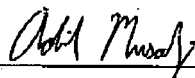
Examiner does not specifically address this limitation. The cited references do not disclose or mention data representing road segments, let alone data representing road segments that are not imagery data that correspond to visual appearances of roads. Houston, et al. specifically disclose the use of visual images as road data to provide a driving simulation, which is opposite of the claimed feature.

Claim 64 recites, *inter alia*, "wherein data representing each of the plurality of road segments is associated with geographic coordinates and an address range." The Examiner does not specifically address this limitation. The cited references do not disclose or mention data representing road segments, let alone geographic coordinates and an address range associated with respective data representing each of the road segments.

III. Summary

It is respectfully asserted that all of the pending claims are patentable over the cited references, and allowance of the pending claims is earnestly solicited. If the Examiner believes that a telephone interview would be helpful in resolving any outstanding issues, the Examiner is respectfully invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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